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Cooperative ECONOMIC INSECT REPORT

INSECT
REPORT

REPORT

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Branch
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Volume 7 January 4, 1957 Number 1

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

BEET LEAFHOPPER light to severe on spinach in Winter Garden area of Texas. (p. 3).

IPS BEETLES serious in pines in southeastern Texas. (p. 4).

SUMMARY OF INSECT CONDITIONS - 1956 - Louisiana (p. 6). New Mexico (p. 9).

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WEATHER OF THE WEEK ENDING DECEMBER 31, 1956

Generally fair to partly cloudy weather prevailed over much of the nation from Christmas to New Year's Day. The principal exception was that portion of the country from the Great Lakes region and Ohio Valley northeastward. Here, as south-central Canadian low pressure centers moved across the area and intensified, skies were cloudy, temperatures fluctuated with frontal pressures and moderate to heavy precipitation totals were accumulated.

On the 29th and 30th one such storm center brought heavy snowfalls ranging from 4 to over 10 inches to eastern and northern portions of the New England States and at the end of the period another was again increasing snow depths in the area. Attended by gale winds, the first of these blew down snow laden tree limbs, interrupted utility services and severely hampered traffic. Following this storm, temperatures in the northern Atlantic States dropped to the lowest level of the season although averages for the week were somewhat above normal.

Dry and unseasonably warm weather prevailed over the northern and central Great Plains with weekly temperatures averaging above normal by 12° or more throughout these parts and with Havre, Montana observing a departure of $+26^{\circ}$ for the period. The remainder of the west was also dry but in the Southern Plains States temperature conditions were nearer to normal and from the Divide westward they averaged below, except in the far southwestern desert region where they averaged above to as much as +7° at San Diego, California. Unseasonably cool weather was experienced in the extreme Southeast and on the mornings of the 26th through the 28th freezing temperatures with some frost caused damage in Florida. Due to the exceptional warm conditions which existed over this area during previous periods of the month, South Carolina observed the warmest December in 67 years.

Forest fire activity was reported in southeastern Georgia and southern California and as the weather remained dry in these sections the danger of further outbreaks was increased. The dry weather accompanied by warming also increased chances for soil erosion in the Great Plains should strong winds occur. Some blowing soil was reported this week in Oklahoma and eastern Colorado.

Snow cover at lower elevation is confined primarily northward of a line extending from northeastern North Dakota to north-central Illinois, and thence eastward to the Atlantic Coast but with northwestern Ohio and southern Michigan excluded. One of the greatest of these lower level depths is 23 inches at Houghton, Michigan.

Ice on the Missouri River is reported 8 and 13 inches thick at Huron, South Dakota and Bismarck, North Dakota, respectively. Other ice measurements include 4 inches at Dubuque, Iowa; 3. 5 inches at Minneapolis, Minnesota on the Mississippi and 11. 5 inches at Greenville, Maine. (Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

WINTER GRAIN MITE (Penthaleus major) - TEXAS - Light to medium infestation reported on oats and a medium to heavy infestation on barley in Hunt County. (Hawkins). Heavy infestation on oats in Falls County. (Turney, Garner, Dec. 20).

CUTWORMS - OKLAHOMA - Found in two wheat fields near Lone Wolf in Kiowa County, week of Dec. 21. (Hudson).

SPOTTED ALFALFA APHID - TEXAS - Medium infestation reported in Rockwall County. (Hawkins, Dec. 20). Light infestation on volunteer alfalfa in Falls County. (Turney, Garner, Dec. 20). Medium to severe infestation on alfalfa at Winter Garden Station. (Richardson, Dec. 20). OKLAHOMA - Most southwestern counties have lower populations than at this time in 1955. (Coppock, Hatfield, Dec. 21).

A TERMITE (Gnathamitermes tubiformans) - OKLAHOMA - Damage in numerous pastures in Tillman County. (Hatfield, Dec. 21).

FRUIT INSECTS

A SCALE (Lecanium sp. prob. corni) - CALIFORNIA - Extremely heavy infestations in 1956 in pear and prune orchards in Placerville district of El Dorado County. Pickers objected to working in the orchards because of honeydew on leaves and fruit. At present, twigs and branches encrusted with second-instar nymphs. (Cal. Coop. Rept., Dec. 21).

CLOVER MITE (Bryobia praetiosa) - UTAH - Eggs numerous on trees in some Salt Lake and Davis County orchards. (Knowlton, Dec. 20).

TRUCK CROP INSECTS

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Damage to cabbage, cauliflower, spinach and lettuce medium to severe in Dimmit and Zavala Counties. (Richardson, Dec. 20).

BEET LEAFHOPPER (Circulifer tenellus) - TEXAS - Damage to spinach light to severe in Winter Garden area. (Richardson, Dec. 20).

A WEEVIL (Nemocestes incomptus) - CALIFORNIA - Light infestation in strawberries in coastal Oceana district of San Luis Obispo County, Nov. 14 and heavy Nov. 27. First collection from this county. (Cal. Coop. Rept., Dec. 21).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - In 480 bolls inspected in Jackson County, 120 were infested with 78 live and 205 dead larvae. One gin stand inspection in each of Caddo and Tillman Counties showed 25 and 7 dead larvae respectively. Lint cleaner inspections in six western counties showed no live and 106 dead larvae. (State-Fed. PBW Cont. Prog.). ARIZONA - Gin trash and lint cleaner inspections show a much higher population in Greenlee County than in 1955 and about the same in Graham and Cochise Counties. Reference to light damage in Cochise County (CEIR, 6(43):1012) was erroneous as no measurable damage to cotton in this county has been determined. (Ariz. Coop. Rept.).

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - A large percentage of knotty cotton bolls left in fields in Cotton and Tillman Counties infested with larvae, Nov. 26. (Hatfield).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

IPS BEETLES - TEXAS - Serious infestations and activity in pines in 16 southeastern counties. Adults laying eggs in pines reduced in vigor. (Gaines, Dec. 20).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS - UTAH - Appearing in backs of cattle in warmer portions of southern area. (Knowlton).

CATTLE LICE - OKLAHOMA - Increasing on cattle in Custer County. (Hudson, Dec. 21).

BED BUG (Cimex lectularius) - UTAH - Five homes infested in one community. (Knowlton).

STORED PRODUCTS INSECTS

STORED GRAIN INSECTS - TEXAS - A bin of 50,000 bushels of grain sorghum in Falls County was fumigated to control the following: rice weevil, lesser grain borer, flat grain beetle, saw-toothed grain beetle, Indian-meal moth and flour beetles. Saw-toothed grain beetle and flat grain beetle were only insects found in another 100,000 bushels of grain sorghum in Falls County. (Turney, Garner, Dec. 20).

KHAPRA BEETLE (Trogoderma granarium) - WEST VIRGINIA - Survey still underway. No infestations found. (Dorsey, Hansen, Gillespie, Dec. 22).

MISCELLANEOUS INSECTS

BROWN-BANDED ROACH (Supella supellectilium) - CALIFORNIA - Increasing in number of specimens submitted and complaints received. More widespread and increasing in importance. (Cal. Coop. Rept., Dec. 21).

CLUSTER FLY (Pollenia rudis) - UTAH - Very numerous in some Ogden homes. (Knowlton, Dec. 20).

LIGHT TRAP COLLECTIONS

	Pseud.	Agrotis	Prod.	Perid.	Feltia	Heliothis		Laphyg.
	unipun.	ypsilon	ornith.	marg.	subt.	zea	vires.	frugip.
TEXAS								
College Station 12/16-21	14	1		3	4			4
Greenville 12/1-15	4	3				1		
Weslaco 12/1-15	175	25	45	16	63	12	1	35
Winter Haven 12/1-15	22	15	8	4	19	6		2
SOUTH CAROLINA (County)								
Oconee 12/22-28	4	4	13	1	6			

SUMMARY OF INSECT CONDITIONS - 1956

LOUISIANA

Reported by A. D. Oliver

Highlights: Three species of insects not known to be present in Louisiana were found during 1956. These were a species of BLISTER BEETLE (Epicauta sp.) found in Franklin and Concordia Parishes feeding on blooms of bitter weeds; a STINK BUG, known to be a predator of Colorado potato beetle larvae, found in a potato field in Rapides Parish and the YELLOW-MARGINED LEAF BEETLE (Microtheca ochroloma) found feeding on mustard greens in Tangipahoa Parish. Heavy infestations of SPOTTED ALFALFA APHID and dry weather inflicted major damage to alfalfa in Red River, Bossier and Caddo Parishes. BOLLWORM (Heliothis zea) infestations in corn and cotton were more serious and widespread than during 1955. Difficulty in controlling bollworms was more pronounced than usual. Generally, the BOLL WEEVIL (Anthonomus grandis) problem was solved where the farmer accepted advice as to what insecticide to use and when and how to apply it. A SAP BEETLE (Lobiopa insularis) caused severe damage to strawberries toward the end of the season. Damage from this beetle limited the cold pack season to an official three days. VEGETABLE WEEVIL (Listroderes c. obliquus) again seriously damaged pepper and tomato seedlings, causing many farmers in Tangipahoa, Livingston and St. Tammany Parishes to replant up to three and four times. BLACI CUTWORM (Agrotis ypsilon) took usual toll of corn, strawberry and tomato seedlings over the State. There continues to be an acute problem with IMPORTED FIRE ANT (Solenopsis saevissima v. richteri) in St. Landry, Evangeline, Acadia, Plaquemine, Washington, Livingston, Avoyelles and Lafayette Parishes. MOSQUITOES (Aedes sollicitans, Anopheles sp. and Culex sp.) were a major problem to home owners over south Louisiana during the summer.

Cereal and Forage Insects: ARMYWORM (Pseudaletia unipuncta) first appeared in small grains at 1-15 per square yard in Bossier, Ouachita, East Carroll, West Carroll, Tensas, and Avoyelles Parishes during week of February 17, 1956. Light infestations remained in small grain up to about April 10; populations rapidly increased during the latter part of April and May. Some infestations became severe enough in May to warrant insecticidal control in wheat, oats and ryegrass in East Carroll, Tensas and Bossier Parishes. Populations declined very rapidly during the last week of May and early June and were not a threat thereafter. Very light infestations of larvae were found in late summer on grass in St. Landry, Tensas and St. John the Baptist Parishes. Occasional larvae were found in oats, wheat and wild grasses throughout the fall. FALL ARMYWORM (Laphygma frugiperda) populations were very heavy on wild grasses, millet, seedling corn, crab grass and sorghum during June and July. Only very light populations infested oats, wheat and barley during the fall. Larvae also did considerable feeding on alfalfa in Caddo, Bossier and East Carroll Parishes. BEET ARMYWORM (Laphygma exigua) populations built up in alfalfa during late summer and caused considerable defoliation in Caddo, Bossier, Natchitoches and East Carroll Parishes.

SPOTTED ALFALFA APHID built up to a very damaging number during late summer. The dry weather conditions, frequent cutting and heavy aphid populations inflicted heavy damage to alfalfa in Bossier, Red River, Natchitoches and Caddo Parishes, causing many farmers to replant. Although aphid populations existed throughout summer, beneficial insects were a great factor in keeping infestations down. THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) populations began to build up in alfalfa about mid-June and reached a peak about October 1. Localized damage to alfalfa was apparent in several northwest areas. BEAN LEAF BEETLE (Cerotoma trifurcata) caused considerable defoliation to soybeans during late summer in northeast Louisiana but very little damage resulted to the bean crop. VELVETBEAN CATERPILLARS (Anticarsia gemmatilis) infested soybeans generally over south Louisiana but very little damage resulted with only a few fields in the Bayou Lafourche area being treated for control. Heavy populations of PEA APHID (Macrosiphum pisi) infested leguminous crops including alfalfa over the State throughout spring and summer. No measurable damage occurred. Heavy populations of GRAPE COLASPIS (Colaspis sp.) again infested red clover and white clover in south Louisiana during early summer but very little damage resulted. TARNISHED PLANT BUG (Lygus lineolaris) infestations were generally widespread in alfalfa and clovers over Louisiana with no apparent damage. RICE STINK BUG (Solubea pugnax) populations were generally very light in the rice-growing area. Damage by this pest to the fancy rice will again result in loss. CORN EARWORM (Heliothis zea) populations were very heavy over the State. Approximately 70 percent of the corn ears examined showed infestation. Large population increases in corn resulted in heavy infestations in tomatoes, cotton, and alfalfa. STRIPED BLISTER BEETLE (Epicauta sp.) infestations were localized in clover and soybeans generally in St. Landry, Acadia, and Jefferson Davis Parishes. Several small areas of these crops were completely defoliated. A MITE (Petrobia apicalis) was heavy on early white and crimson clovers. Very little control was initiated as usual. GARDEN WEBWORM (Loxostege similalis) infestations were severe for a short time in alfalfa over north Louisiana. Many fields had 100 percent of the terminals infested.

Sugarcane Insects: SUGARCANE BORER (Diatraea saccharalis) infestations were high in cane and corn over south Louisiana. Most farmers obtained good control by dusting the cane four or five times. Generally, corn was damaged by the sugarcane borer on farms where the crop was planted adjacent to sugarcane. Total damage by this pest was much lower than in 1955.

Nut and Fruit Insects: FALL WEBWORM (Hyphantria cunea) infestations occurred early, heavy and widespread in pecan groves over the State. Complete defoliation occurred in some groves with damage difficult to estimate. A NITIDULID (Lobiopa insularis) was very damaging to the ripe strawberry fruits again this past season. Poor cultural control (sanitation) in the field is partially responsible for the heavy populations of beetles in the fields. SPIDER MITES (Tetranychus sp.) and STRAWBERRY ROOT APHID (Aphis forbesi) infested strawberry plants throughout spring and early summer. Most growers applied control measures. BLACK CUTWORM (Agrotis ypsilon) caused trouble on strawberries by destroying plants in the seed bed and on the row. PURPLE SCALE (*Lepidosaphes beckii*), CITRUS RED MITE (*Metatetranychus citri*) and CITRUS RUST MITE (*Phyllocoptruta oleivora*) were serious pests of citrus fruits and in some areas lowered the grade of fruits harvested for market.

Truck Crop Insects: CABBAGE LOOPER (*Trichoplusi ni*) was very serious on cole crops. The high degree of resistance to insecticides makes this pest hard to control where tolerance ranges are so minute. This pest was particularly bad in Plaquemine, St. John the Baptist, West Feliciana and Concordia Parishes. TOMATO FRUITWORM (*Heliothis zea*) gave some trouble in Plaquemine and West Feliciana Parishes, but generally not as much as expected on tomatoes. HORNWORMS (*Protoparce quinquemaculata*, and *P. sexta*) were very bothersome to some tomato growers in West Feliciana, Tangipahoa and Plaquemine Parishes. SOUTHERN GREEN STINK BUG (*Nezara viridula*) heavily infested okra, tomatoes, lima beans and pole beans in Tangipahoa, St. John the Baptist, Livingston and Caddo Parishes, which resulted in considerable damage. VEGETABLE WEEVIL (*Listroderes costirostris obliquus*) infestations were serious in several truck crop parishes. Many pepper and tomato growers in Tangipahoa Parish had to replant three and four times. At least six species of LEAFHOPPERS (*Empoasca* sp.) heavily infested sweetpotatoes in south Louisiana during late summer with 1000-5000/100 sweeps being very common in fields in St. Landry, Evangeline, and Acadia Parishes. SWEETPOTATO WEEVIL (*Cylas formicarius elegantulus*) populations were generally heavy in sweetpotatoes this year. Several fields in south Louisiana had approximately 25 percent of the roots infested with this weevil, particularly where control measures were not used.

Cotton Insects: BOLL WEEVIL (*Anthonomus grandis*) was the number one cotton insect pest in 1956. Resistance to the chlorinated hydrocarbon insecticides was more widespread than in 1955. Most farmers used other insecticides which continue to kill and had very little difficulty in controlling this pest. Infestations up to 85-95 percent could be found in each cotton growing parish. One rough estimate claims that through the work of the Agricultural Experiment Station entomology staff and Extension Entomologist the cotton farmers in Louisiana saved about $27,000,000.00 in 1956. Damage to cotton was general over the State with the Red River Valley, Mississippi Delta and Ouachita Valley Parishes being the more heavily infested areas. BOLLWORM (*Heliothis zea*) infestations were generally very heavy in cotton over the State. Damage was moderate. Most farmers controlled the bollworms, but some had difficulty because they waited too long to apply insecticides. TOBACCO BUDWORM (*Heliothis virescens*) infestations damaged cotton in several Red River Valley Parishes where farmers began control schedules too early. Cotton aphid, spider mites, cotton fleahopper, thrips and plant bugs inflicted little to no measurable damage to cotton this past year.

Forest and Ornamental Insects: One loblolly PINE SAWFLY infestation became established in LaSalle Parish. Severe defoliation of pines resulted on one tract of timber. FALL WEBWORM (*Hyphantria cunea*) populations were damaging to pecan, persimmon, wild cherry and willow throughout the summer. A TEA SCALE (*Fiorinia theae*) was the most common ornamental insect in Louisiana. MEALYBUGS and WHITEFLIES were also present in large numbers on azaleas and camellias.

Insects Affecting Man and Animals: SCREW-WORM (Callitroga hominivorax) become established in wounds on several dogs in East Baton Rouge and West Feliciana Parishes. Two dehorned cows became infested in Bossier Parish in late summer. SALT-MARSH MOSQUITO (Aedes sollicitans) was a severe problem over most of south Louisiana throughout the summer. There were so many mosquitoes in Plaquemine Parish just after hurricane Flossy that a person could not get outside for long in many areas. HORN FLY (Siphona irritans) STABLE FLY (Stomoxys calcitrans), HORSE FLIES (Tabanus americanus, T. atratus et. al.) were unusually numerous on range cattle throughout most of the summer over south Louisiana. BROWN DOG TICK (Rhipicephalus sanguineus) was numerous as usual in West and East Feliciana, Livingston, St. Helena, and Tangipahoa Parishes.

Stored Grain Insects: RICE WEEVIL (Sitophilus oryza) infestations are not as serious as last fall and summer in stored corn. SQUARE-NECKED GRAIN BEETLE, SAW-TOOTHED GRAIN BEETLE and ANGOUMOIS GRAIN MOTH are not serious at present but are expected to build up during storage.

SUMMARY OF INSECT CONDITIONS - 1956

NEW MEXICO

Reported by J. J. Durkin

Highlights: SPOTTED ALFALFA APHID was the most damaging and widespread insect in New Mexico during 1956. From January to July infestations were medium to heavy throughout most of the State. July, August and September were relatively aphid-free but a very damaging state-wide build-up started on seedling stands in October and moved to established stands to cause heavy damage before cold weather slowed down the rapid build-up. Damage and cost of control is estimated at $3,000,000 for 1956. The heavier than usual fall build-up caused an increase in losses over those of the past two years. GRASSHOPPERS infested over 2 1/2 million acres of rangeland and approximately 200,000 acres of crop land. Control programs in cooperation with the Grasshopper Control Project were carried out on 671,617 acres of rangeland. Farmers controlled grasshoppers on 30,650 acres of crop land. SPIDER MITE infestations were very heavy in most fruit-growing areas. Fruit growers applied several additional sprays to keep them under control. The PINK BOLLWORM infestation in southern Dona Ana County increased to cause damage to approximately 200 acres of cotton. Although no damaging infestations were found in other areas the number of larvae picked up in gins is higher this year than last. The pink bollworm may pose a serious threat to cotton productions next year.

Cereal and Forage Insects: CLOVER MITE (*Bryobia praetiosa*), TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*), and DESERT SPIDER MITE (*T. desertorum*) caused damage to alfalfa in Bernalillo and Eddy Counties. PEA APHID (*Macrosiphum pisi*) infestations were light to medium in April and May in areas where spotted alfalfa aphids were not being controlled. LYGUS BUGS (*Lygus elisus* and *L. hesperus*) were light in most alfalfa fields until July and August when counts jumped from 12-24 per 100 sweeps to 100-150 per 100 sweeps. Damage was heavy in untreated seed fields. LEAF MINERS (*Liriomyza* spp.) caused light damage to spring-seeded alfalfa. ALFALFA WEBWORM (*Loxostege commixtalis*) damaged one alfalfa stand in Dona Ana County. THRIPS (*Frankliniella* spp. and *Thrips tabaci*) infestations were heavy in alfalfa throughout the State but extent of damage, if any, is undetermined. SAY STINK BUG (*Chlorochroa* sayi) was heavy on small grains in most areas in May and June. GREEN BUG (*Toxoptera graminum*) damaged small grains in Eddy County during May. FALSE CHINCH BUGS (*Nysius* spp.) were heavy on grain sorghum in Chaves, Hidalgo, Curry, and Roosevelt Counties. BROWN WHEAT MITE (*Petrobia latens*) and DATE MITE (*Oligonychus pratensis*) were light to medium on wheat in Roosevelt County in April. FIELD CRICKET (*Acheta assimilis*) damaged field corn in Hidalgo County. CORN EARWORM (*Heliothis zea*) damaged field corn throughout the season. The most damage was in the whorl. SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) damaged corn on eastern side of the State while FALL ARMYWORM (*Laphygma fruigiperda*) infested corn stalks in the southern end of the State. CORN LEAF APHID (*Rhopalosiphum maidis*) was a minor pest of broom corn and field corn in spotty infestations in the east plains area. A MITE (*Oligonychus stickneyi*) destroyed one corn planting at State College.

Fruit Insects: MITES (*Tetranychus mcdanieli* and *Bryobia praetiosa*) severely damaged apple trees in San Juan, Lincoln, Rio Arriba and Bernalillo Counties. CODLING MOTH (*Carpocapsa pomonella*) damage was light in commercial orchards but small orchards and home plantings were heavily infested. WOOLLY APPLE APHID (*Eriosoma lanigerum*) infestations were lighter than usual with only a few heavy infestations reported. FRUIT TREE LEAF ROLLER (*Archips argyrospila*) infested apple trees in Taos and Rio Arriba Counties. TENT CATERPILLAR (*Malacosoma* sp.) infestations were light in orchards inTaos and Rio Arriba Counties. Shot hole borers, peach tree borers and peach twig borers were common in peach orchards. GREEN PEACH APHID (*Myzus persicae*) infestations were light to medium throughout the State early in season. WESTERN GRAPE LEAF SKELETONIZER (*Harrisina brillians*) infested home plantings of grapes but were not a problem in commercial vineyards. GRAPE LEAFHOPPERS (*Erythroneura* sp.) infested grapes in all areas. Many home plantings were severely damaged.

Truck Crop Insects: A BLISTER BEETLE (*Epicauta bispinosa*) destroyed approximately 600 acres of seedling tomatoes in Lea County. This is the first record of this species being of economic importance. FLEA BEETLES damaged tomato plantings in Dona Ana County and melons and chili in Valencia and Bernalillo Counties. SPOTTED CUCUMBER BEETLES (*Diabrotica* sp.) damaged melon, tomato, and chili seedlings in Valencia

County. STRIPED CUCUMBER BEETLE (*Acalymma vittata*) infested late melon plantings in Dona Ana County. A TORTOISE BEETLE (*Plagiometriona diversicollis*) caused light to medium damage in chili fields in Valencia County, but were controlled. TOMATO FRUITWORM (*Heliothis zea*) and TOMATO HORNWORM (*Protoparce quinquemaculata*) infested tomatoes in Dona Ana and Luna Counties but growers kept them under control. CABBAGE LOOPER (*Trichoplusia ni*), CORN EARWORM (*Heliothis zea*), and FALL ARMYWORM (*Laphygma frugiperda*) infested fall lettuce in Dona Ana County but growers controlled them effectively. LEAF MINERS (*Liriomyza* sp.) infested beans in Dona Ana County. WESTERN BEAN CUTWORM (*Loxagrotis albicosta*) damaged beans in Torrance County. ONION THRIPS (*Thrips tabaci*) caused light to medium damage to onions in Dona Ana County. Most growers applied insecticides.

Cotton Insects: Cotton insect infestations were generally light with only spotty damaging outbreaks. Bollworm infestations were very light compared with previous years. The most damaging cotton insects during 1956 were lygus bugs which infested fields in July and August causing heavy square drop in many areas. Pink bollworms damaged about 200 acres of cotton in southern Dona Ana County and may be a serious threat to next year's crop in the southern end of the State. SEED-CORN MAGGOT (*Hylemya cilicura*) caused heavy damage in spots but were not widespread. THRIPS (*Franklinella* spp. and *Thrips tabaci*) infestations were light with only a few infestations needing control. LEAF MINER (*Liriomyza* spp.) infestations were general but light. MITES (*Tetranychus telarius*, *T. cinnabarinus* (carmine form of *T. telarius*), and *T. desertorum*) were light on seedling cotton but the desert mite infested fields in Dona Ana , Luna, and Hidalgo Counties late in the season. COTTON APHIDS (*Aphis gossypii*) were present on seedling cotton throughout the cotton-growing areas but heavy infestation was very spotty. Heavy mid-season infestations developed in Chaves and Eddy Counties. Late season infestations were light and spotty. BOLLWORM (*Heliothis zea*) was present in light infestation on cotton before plants started to set squares. In July bollworms started to build up but never reached outbreak proportions and damaging infestations were spotty. CABBAGE LOOPER (*Trichoplusia ni*) and COTTON LEAFWORM (*Alabama argillacea*) infested cotton in July causing heavy damage to leaves in some areas in Eddy, Chaves, Quay, Lea, and Dona Ana Counties, but the infestations lasted only one generation. Diseased larvae were very numerous in Lea and Dona Ana Counties. LYGUS BUGS (*Lygus elisus* and *L. hesperus*) invaded cotton fields in Dona Ana, Eddy, and Chaves Counties in late July and August, and caused heavy square drop in many fields. COTTON FLEAHOPPERS (*Psallus seriatus*) were very light throughout the season.

Forest, Ornamental and Shade Tree Insects: SMALLER EUR. ELM BARK BEETLE (*Scolytus multistriatus*) was found dead in a Chinese elm in Albuquerque. This was a State record. A TUSSOCK MOTH (*Halisidota ingens*) infested ponderosa pine in northern New Mexico forests. TENT CATERPILLARS (*Malacosoma* spp.) infested cottonwoods, pecans, and poplars throughout the State. A SCALE (*Saissetia* sp.) was heavy on mulberry and ash in Dona Ana County. PINE NEEDLE SCALE

(Phenacaspis pinifoliae) infested pines in many areas. SAN JOSE SCALE (Aspidiotus perniciosus) was heavy on poplars in Taos County. EUROPEAN ELM SCALE (Gossyparia spuria) was heavy on elms in Bernalillo and Santa Fe Counties. APHIDS and MITES were heavy on most ornamentals. WHITE GRUBS (Phyllophaga spp.) damaged turf in Bernalillo County. Larvae of A BILLBUG (Calendra phoeniciensis) damaged Bermudagrass lawns in Dona Ana County. This was a State record.